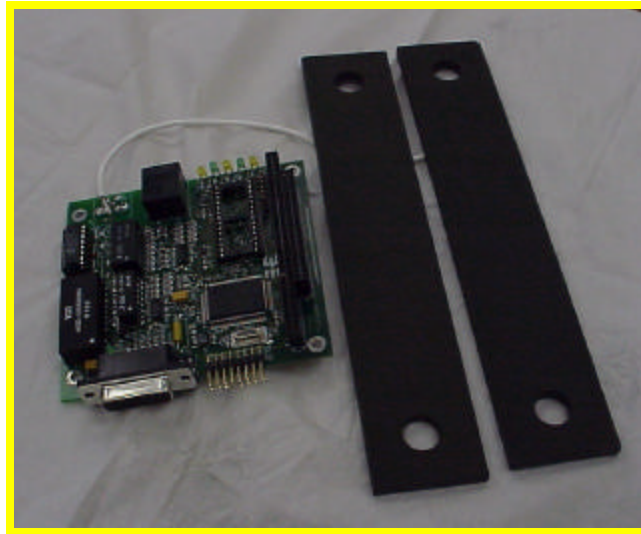


Stanford Composite Smart Monitoring



Objective

A system that is currently under development allows structural monitoring of composites (and ordinary metallics) to yield information concerning stress points, penetrations, delaminations, etc. It can be active during buildup, installation, and operation of the object. It is based upon technology developed at Stanford University, and it could be an integral item of health monitoring aboard launch and space transportation vehicles.

Why Needed

Technology is needed to permit condition assessment of composite structures used in launch vehicles as an aid to safety and availability decisions. The fuel tanks of most new vehicles are made of non-metal composites, which are very difficult to inspect for integrity. The described technology installed when the tanks or other panels are manufactured permits continuous inspection during every step of construction and assembly. The system permits surveillance during the curing process as well as during use. It may be necessary to provide such assurances before a vehicle using composites can be launched.

Point of Contact

W. T. Powers / ED12
Phone: 256-544-3452
Email: w.t.powers@msfc.nasa.gov

Sponsor

Space Shuttle Program (SSP)